

AMENDMENTS TO THE SPECIFICATION

Please amend paragraph [0001], [0012] [0027], [0028], [0040], and [0052] as follows:

[0001] This application hereby claims priority under 35 U.S.C. 119 to U.S. Provisional Patent Application No. 60/495,649 filed on ~~13~~18 August 2003, entitled “Method for Timeslot Allocation to Reduce Guard Band Overhead in Ethernet Passive Optical Networks,” by inventor Glen Kramer.

[0012] Embodiments of the present invention provide an EPON system that facilitates reduced overhead between upstream data bursts. In one ~~One~~ embodiment of the present invention, ~~provides a system that reduces data burst overhead in an Ethernet passive optical network which includes a central node and at least one remote node, wherein downstream data from the central node is broadcast to the remote nodes, and wherein upstream data from a remote node is transmitted to the central node in a unicast manner. During operation, the central node~~ an OLT transmits grant messages to a number of remote nodes ~~ONUs,~~ wherein a grant message for a specified ~~remote node~~ ONU assigns a start time and a duration of a transmission timeslot in which the ~~specified remote node~~ ONU may transmit an upstream data burst. In response to the grant messages, the ~~central node~~ OLT then receives a number of upstream data bursts, wherein the time gap between two consecutive upstream data bursts is less than the summation of a default laser turn-on time, a default laser turn-off time, an AGC period, and a CDR period.

[0027] FIG. 4A illustrates transmission of downstream traffic with point-to-point ~~point~~ emulation in an EPON (prior art).

[0028] FIG. 4B illustrates transmission of upstream traffic with point-to-point emulation in an EPON (prior art).

[0040] The data structures and procedures described in this detailed description are typically stored on a computer readable storage medium, which may be any device or medium that can store code and/or data for use by a computer system. This includes, but is not limited to, application specific integrated circuits (ASICs), field-programmable gate arrays (FPGAs), semiconductor memories, magnetic and optical storage devices such as disk drives, magnetic tape, CDs (compact discs) and DVDs (digital versatile discs or digital video discs), and computer instruction signals embodied in a transmission medium (with or without a carrier wave upon which the signals are modulated).

[0052] FIG. 4B illustrates transmission of upstream traffic with point-to-point emulation in an EPON (prior art). In the upstream direction, ONU 451 inserts its assigned LLID 461 in the preamble of each transmitted frame. Accordingly, PtPE sub-layer 440 of OLT 400 disseminates the frame to MAC port 431.